

AMENDMENTS

Please cancel all of the pending claims, i.e., claims 1-4, 6-10, 12, 13, 33-38, 49-52, 57, 63 and 66-102, without prejudice and add new claims 103-139 as follows.

71 --103. (New) An isolated, enriched or purified immunogenic composition comprising:

(a) one or more isolated autologous target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells which are treated with IFN- γ , TNF- α , or both in vitro and which express one or more CD28 or 4-1BB molecules at a level higher than the amount that said one or more CD28 or 4-1BB molecules are expressed from hepatocellular carcinoma, lymphoma or colorectal carcinoma cells in a patient mammal; and

(b) one or more antibodies comprising one or more binding sites for said one or more CD28 or 4-1BB molecules on the surface of T cells in said patient mammal, and wherein said one or more antibodies further comprise one or more antigen binding sites for one or more gp55 antigens on the surface of said one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells;

wherein one or more of said one or more antibodies are attached to one or more of said one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells at said one or more gp55 antigens.

104. The composition of claim 103, wherein said composition is isolated.

105. The composition of claim 103, wherein said composition is enriched.

106. The composition of claim 103, wherein said composition is purified.

107. The composition of claim 103, wherein said one or more hepatocellular carcinoma, lymphoma or colorectal carcinoma cells comprise one or more hepatocellular carcinoma cells.

108. The composition of claim 103, wherein said one or more hepatocellular carcinoma, lymphoma or colorectal carcinoma cells comprise one or more lymphoma cells.

109. The composition of claim 103, wherein said one or more hepatocellular carcinoma, lymphoma or colorectal carcinoma cells comprise one or more colorectal carcinoma cells.

110. The composition of claim 103, wherein said one or more CD28 or 4-1BB molecules comprise one or more CD28 molecules.

111. The composition of claim 103, wherein said one or more CD28 or 4-1BB molecule comprise one or more 4-1BB molecules.

112. The composition of claim 103, wherein said one or more hepatocellular carcinoma or colorectal carcinoma cells express said one or more CD28 or 4-1BB molecules at a level 50% higher than the amount that said one or more CD28 or 4-1BB molecules are expressed from hepatocellular carcinoma, lymphoma or colorectal carcinoma cells in a patient mammal.

113. The composition of claim 103, wherein said hepatocellular carcinoma or colorectal carcinoma cell expresses said one or more CD28 or 4-1BB molecules at a level 2 fold higher than the amount that said one or more CD28 or 4-1BB molecules are expressed from hepatocellular carcinoma or colorectal carcinoma cells in a patient mammal.

114. The composition of claim 103, wherein said hepatocellular carcinoma, lymphoma or colorectal carcinoma cell expresses said one or more CD28 or 4-1BB molecules at a level 10

fold higher than the amount that said one or more CD28 or 4-1BB molecules are expressed from hepatocellular carcinoma, lymphoma or colorectal carcinoma cells in a patient mammal.

115. The composition of claim 103, wherein said patient mammal is a human.

116. The composition of claim 103, wherein the one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells are treated with IFN- γ .

117. The composition of claim 103, wherein the one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells are treated with TNF- α .

118. The composition of claim 103, wherein the one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells are treated with IFN- γ and TNF- α .

119. The composition of claim 103, wherein said antibody is a bispecific or multispecific monoclonal antibody.

120. The composition of claim 103, wherein said T cells are CD3+CD8+CD25+ T cells.

121. The composition of claim 103, wherein substantially all of said antibodies are attached to said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

122. The composition of claim 103, wherein over 80% of said antibodies are attached to said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

123. The composition of claim 103, wherein over 90% of said antibodies are attached to said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

124. The composition of claim 103, wherein over 95% of said antibodies are attached to said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

125. The composition of claim 103, wherein the composition is substantially free of said antibodies that are not bound to said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

126. The composition of claim 103, wherein a pharmaceutically effective amount of said antibodies are bound to said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

127. The composition of claim 103, further comprising a pharmaceutically acceptable carrier or excipient.

128. The composition of claim 103, wherein at least one of said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells has attached thereto a plurality of said antibodies.

129. The composition of claim 103, wherein said antibodies comprise two or more antigen binding sites for one or more gp55 antigens on the surface of said one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

130. The composition of claim 103, wherein said antibodies comprise two or more binding sites for said one or more CD28 or 4-1BB molecules on the surface of T cells in said patient mammal.

131. The composition of claim 103, wherein said composition comprises two or more antibodies comprising one or more antigen binding sites for one or more gp55 antigens on the surface of said one or more target hepatocellular carcinoma, lymphoma or colorectal carcinoma cells.

132. The composition of claim 103, wherein said composition comprises two or more antibodies each comprising a binding site for a different one of said CD28 or 4-1BB molecules.

133. The composition of claim 103, wherein said composition comprises two or more antibodies each attached to a different antigen.

134. The composition of claim 103, further comprising a pharmaceutically effective amount of IFN- γ , TNF- α , or both.

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continued
135. The composition of claim 103, wherein said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells are treated with 10-100 U of IFN- γ and 10-100 U of TNF- α .

136. The composition of claim 103, wherein said hepatocellular carcinoma, lymphoma or colorectal carcinoma cells are treated with 100 U of IFN- γ and 50 U of TNF- α .

137. The composition of claim 107, wherein said hepatocellular carcinoma cells are hepa 1-6 cells.

138. The composition of claim 108, wherein said lymphoma cells are EL-4 cells.

139. The composition of claim 109, wherein said colorectal carcinoma cells are SMCC-1 cells.--.